

NOTES ON SOME RODENTS FROM SAUDI ARABIA AND KUWAIT

BY

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The following notes were made on specimens collected while travelling in the Arabian peninsula on desert locust control chiefly during the year 1946 which was a particularly good rat year following the good rains and consequent abundant herbage of the 1945/46 season.

The author is much indebted to the authorities at the British Museum for determinations and for the taxonomic characters which are included under each species.

1. *Tatera indica* Hardwicke

This is a large grey rat (♀ specimen, H & B. 20.5 cm., tail 22 cm.) living in warrens with large entrance holes. Nocturnal.

Tatera was only collected at one place in Arabia and that was in the immediate vicinity of some wells in a shallow depression just to the south of Kuwait town, on 15-3-46. Here a thriving colony existed. This species was unknown to a Nejd Arab and indeed no rat holes so large as those of these Kuwait warrens were seen anywhere in Saudi Arabia.

The warrens were dug in firm sand which was quite bare of vegetation during the greater part of the year due to the fact that any shrub suitable for fuel had been grubbed out and all the other herbage was heavily grazed by the flock of town goats which daily visited the wells during the hot season. Nevertheless, during the cooler part of the year, the depression supported a rich mat of annual herbage and occasionally crops were grown there.

Extralimital range, Central Provinces of India westward to Syria.

2. *Gerbillus cheesmani* Thomas

A beautiful pinky-sandy backed mouse with white underparts about the size of a large field mouse. Silky hairs present on the soles of its feet. No black hairs in the pencil at the end of the tail. Nocturnal. Vernacular name (Nejd) 'Jerdiya'.

This species is common in sandy places of eastern and N.-E. extra-tropical Saudi Arabia and Kuwait.

It is especially abundant amongst dunes of red sands where deep-rooted perennial shrubs such as *Calligonum* and *Ephedra alata* grow and where varied annual herbs spring up during the cool months following winter rains.

This mouse does not form warrens but lives in a small hole with a single entrance which it leaves open. The hole is often burrowed into the side of a sand hummock built-up around a bush. The species is not at all gregarious though two or three are usually about in the same vicinity.

Specimens from Al Saiyarat ($27^{\circ}10'N. \times 44^{\circ}50'E.$), 22-2-46; Kuwait ($29^{\circ}29'N. \times 48^{\circ}E.$), 15-3-46; Hafar el Batin ($28^{\circ}30'N. \times 46^{\circ}E.$), 17-3-46; Qariya ($27^{\circ}35'N. \times 47^{\circ}40'E.$)

3. *Gerbillus dasyurus* Wagner

A small desert mouse difficult to distinguish in the field from the next species, but the hairs of the upperside are clearer yellow without any greyish ones. Soles of hind feet are naked.

Common throughout central and east-central Arabia in limestone escarpment country overblown with red sand supporting steppe vegetation composed of perennial *Rhanterium eppaposum* with abundant and varied annual herbs and grasses in season.

Nocturnal. Feeds on seeds of annual herbs especially *Medicago*. Frequents small holes which are often under loose stone slabs. The entrance and often a chamber just within the entrance, are usually littered with the dry pods of its feasts.

Apparently not gregarious but often abundant where it occurs.

Specimens from Thamami wells ($27^{\circ}40'N. \times 45^{\circ}00'E.$), 24-2-46, ♂, H & B. 10 cm., T. 10.9 cm., H.F. 2.2 cm., E. 1.4 cm., Balum wells ($27^{\circ}15'N. \times 44^{\circ}00'E.$), 24-3-46, ♀, H & B. 8.5 cm., T. 10.5 cm., H.F. 2.4 cm., E. 1.2 cm.; and ♂ H & B. 8.5 cm., T. 12 cm., H.F. 2.4 cm., E. 1.2 cm., and ♂, H & B. 9 cm., T. 8 cm. (tip broken), H.F. 2 cm., E. 1.2 cm.

4. *Gerbillus nanus* Blanford (= *arabicum*).

A small desert mouse difficult to distinguish from the last; both are variable but in general *nanus* has shorter and greyer, less silky hairs on the back, and larger bullae. The soles of hind feet are naked. Nocturnal. Vernacular name (Nejd) 'Farr' plural 'Farran', (but this name also applied to rats and mice in general).

Probably commoner and more widespread over extra tropical Saudi Arabia than the last. This is typically a mouse of silty wadis draining escarpment (limestone) country where varied perennial vegetation occurs including trees (*Acacia*), shrubs (*Zizyphus* and *Lycium*) and woody herbs, (*Zilla spinosa*), and varied Chenopodiaceae, etc., together with a mat of annual herbage during the cool season. But *nanus* also extends into the habitat occupied by *dasyurus*.

This species lives in small holes burrowed in the sides of hummocks of firm silty soil and at least sometimes it occupies the holes of larger rats, e.g. *Psammomys*.

Specimens from Median Saleh ($26^{\circ}50'N. \times 38^{\circ}00'E.$), 27-4-46, ♂, H & B. 9 cm., T. 11 cm., H.F. 2.4 cm., E. 1.4 cm.; Rumaihiya ($25^{\circ}30'N. \times 47^{\circ}00'E.$), 26-2-46; Balum wells ($27^{\circ}15'N. \times 44^{\circ}00'E.$); 25-3-46; Thamami wells ($27^{\circ}40'N. \times 45^{\circ}00'E.$), 23-3-46; Artawiya ($26^{\circ}30'N. \times 45^{\circ}30'E.$), 20-2-46; Raudha Tinhah ($26^{\circ}15'N. \times 46^{\circ}00'E.$), 17-2-46.

5. *Psammomys obesus* Cretzchmar

A desert rat, rather larger than a common rat; upper parts distinctly yellowish at shoulders with rufous tinge on back. The absence of a groove on the outer surface of upper incisors distinguishes this genus from *Meriones*.

Strictly diurnal. Lives gregariously in warrens composed of large-mouthed holes marked by much excavated soil in front of the entrance. The warrens are situated on mounds formed round bushes of *Haloxylon* sp., a plant which provides this rat with both food and shelter and from which it seldom wanders during its hours of activity in the cool of the morning and afternoon.

This rat lives in very populous colonies and although specimens have only been taken in western Arabia at Median Saleh it almost certainly extends into central Arabia at Hail ($27^{\circ}30'N. \times 41^{\circ}45'E.$), but probably does not occur in the limestone escarpment country of eastern Arabia.

6. *Meriones buryi* Thomas

Very distinct from other members of the genus. Hind feet with naked soles. Colour about the same as that of a wild rabbit. Tail very dark. Diurnal in habits.

This is a species confined to S.-W. Arabia, Aden and the Yemen and in the highland trans-montane valleys of Asir in Saudi Arabia. In the last locality colonies occur in wadis draining the inland slopes to the east where large trees of *Acacia* and other robust vegetation provide thickest cover. Probably also the common rat of the terraced cultivated fields up to 8,000 ft. in the vicinity.

Buryi was collected only in the wady Hijla ($18^{\circ}20'N. \times 42^{\circ}35'E.$), 26-6-46, but in future it should be searched for in the Hejaz highlands as far north as Ashaira ($21^{\circ}40'N. \times 40^{\circ}40'E.$) where similar vegetation occurs and to which locality several other Yemeni faunal elements (especially birds) are known to penetrate.

7. *Meriones erythrourus* Gray

A medium-sized rat with the tail sometimes longer than head and body (measurements of some specimens, unsexed, H & B. 16 cm., T. 15 cm.). The upper parts of the body are sandy. Soles of hind feet hairy; skin on soles of hind feet black or dark coloured; nails black; hairs on top of feet yellowish; tail reddish-brown above with a pencil of black hairs at the end.

Very common and widespread at least in north-central and north-eastern Arabia where these rats live in small warrens of open holes usually made in sandy-silty hummocks around bushy vegetation especially in wady beds where varied herbage grows at certain seasons. Nocturnal. Excavate and feed on bulbs of *Iris* sp.

Juveniles, three parts grown, have been trapped in considerable numbers during March. Vernacular name (Nejd) 'Jerdi' (*Meriones* in general).

Specimens from Artawiya ($26^{\circ}30'N. \times 45^{\circ}30'E.$), 20-2-46; Hafar et Batin ($28^{\circ}30'N. \times 46^{\circ}00'E.$), 15-3-46; Anaiza ($26^{\circ}05'N. \times 44^{\circ}00'E.$), 30-3-46, ♂, H & B. 15.5 cm., T. 16 cm., H.F. 3.7 cm., E. 2 cm.; Adwa near Hail ($27^{\circ}20'N. \times 42^{\circ}15'E.$), 9-5-46, ♀, H & B. 16 cm., T. 15 cm., H.F. 3.5 cm., E. 2.2 cm., Rumaihiya ($25^{\circ}30'N. \times 47^{\circ}00'E.$), 26-2-47.

8. *Meriones crassus* Sundevall

Distinguished from *erythrouros* by its slightly smaller size and by the tail being usually shorter than head and body (measurements ♂, H & B. 14 cm., T. 12.5 cm.; ♀, H & B. 15 cm., T. 14 cm.). Soles of feet and nails flesh coloured; tail cream coloured with blackish pencil of hairs at the end. Cranial characters distinguish the two species immediately, in *crassus* the auditory bullae being enormously developed.

Very common and widespread throughout Arabia, even extending into the tropics along the Tihama coastal plain. Lives in warrens which are sometimes of great extent. The warrens are very often made in silty flats which may support rich annual herbage after rain but are quite bare at other times of the year, though of course subterranean parts of the plants such as bulbs, tap-roots, seeds, etc., remain available to the rats as food during dry periods. Warrens have even been found on what are probably perennially barren flats where the only available food appeared to be grains of wheat, etc., which had fallen from passing camel trains. Common amongst *Rhantherium* steppe on limestone over-blown with sand where their food was chiefly seeds of *Medicago*. Feeds also on locusts (*Schistocerca*) when opportunity arises. Nocturnal, crepuscular and probably diurnal as well.

Specimens from Qunfidah (19° 10' N. × 41° 05' E.), Gariya (27° 35' N. × 47° 40' E.), Hafar el Batin (28° 30' N. × 46° 00' E.), 19-3-46, H & B. 15 cm., T. 14 cm., H.F. 3.2 cm., E. 1.6 cm.; Balum wells (27° 15' N. × 44° 00' E.), 25-3-46, ♀, H & B. 13 cm., T. 12 cm., H.F. 3 cm., E. 1.5 cm., 9-4-46, 10-5-46; Rumaihiya (25° 30' N. × 47° 00' E.), 26-2-46; Kuwait (29° 25' N. × 48° 00' E.), 15-3-46; Ajibba (27° 20' N. × 44° 20' E.), 24-3-46, ♂, H & B. 10 cm., T. 8.8 cm., H.F. 2.8 cm., E. 1.5 cm.

9. *Acomys dimidiatus* Cretzchmar

Rocky country, frequenting niches and crevices amongst boulders where annual herbage springs up in abundance after rains, and stony hills with scattered small trees and woody herbs or scanty cushion plants. These mice move with lightning rapidity amongst boulders but remain quite still while under cover. Food consists of seeds of various herbs and grasses. Special feeding shelters are frequent in which debris of their feasts are scattered about. Captive specimens drink water with avidity.

When alarmed the spines are erected causing the animal to appear much larger than it really is.

Much commoner in western Arabia, Hejaz, where suitable habitats are widespread. Apparently less common in central and eastern Arabia where specimens were only taken occasionally amongst limestone rocks.

Specimens from Rumah, Nejd (25° 30' N. × 47° 00' E.), 25-5-43; Shaib Hajlil (27° 30' N. × 44° 30' E.), 24-3-46, ♂, H & B. 11 cm., T. 11.3 cm., H.F. 1.7 cm., E. 2 cm.; Birka (27° 30' N. × 44° 30' E.), 6-6-46, ♀, H & B. 11 cm., T. 11 cm., H.F., 1.8 cm., E. 1.8 cm. and ♀, H & B. 12.2 cm., T. 12 cm., H.F. 1.7 cm., E. 2 cm., (4 foetae); Wady Liya near Taif (21° 15' N. × 40° 20' E.), 17-6-46, ♂, H & B. 11 cm., T. 10.5 cm., H.F. 1.9 cm., E. 2 cm., and ♂, H & B. 11 cm.,

T. 11 cm., H.F. 1.9 cm., E. 1.9 cm.; Abha ($17^{\circ}00'N. \times 43^{\circ}05'E.$), 21-6-46, ♀, H & B. 11 cm., T. 11.3 cm., H.F. 2 cm., E. 2 cm.

10. **Acomys russatus** Wagner

This species is recognised by its grey belly and feet and by the spines starting on head. Habitat similar to the last, the two species having been collected together at Wady Liya near Taif. Habits also similar.

Common in suitable rocky places in Hejaz and Jebel Shammar, Hail, in north-central Arabia.

Specimens from Wady Liya, near Taif ($21^{\circ}15'N. \times 40^{\circ}20'E.$), 17-6-46, ♂, H & B. 11.5 cm., T. 7.5 cm., H.F. 1.7 cm., E. 1.5 cm.

11. **Eliomys melanurus** Wagner

This dormouse, which had not previously been recorded from Saudi Arabia, was only collected upon one occasion. However, it appeared to be locally common in the district frequenting crevices in sand-stone outcrops.

Locality: Dar el Hamra station on the abandoned Hejaz railway ($26^{\circ}50'N. \times 38^{\circ}20'E.$), 24-4-46, ♀, H & B. 13 cm., T. 12 cm., H.F. 2.5 cm., E. 3 cm.

12. **Jaculus jaculus** Linnaeus

Common in sandy places, especially in eastern Arabia where its tracks may be seen all over the dunes, but as it is strictly nocturnal and retires by day below the ground blocking the hole behind itself, this species is seldom seen. Vernacular name, 'Jerboa'.

Artawaiya ($26^{\circ}30'N. \times 45^{\circ}30'E.$), 20-2-46.